

What is the Best Strategy “Evidence-Based Practice” to Teach Literacy Skills for Students with Multiple Disabilities? A Systematic Review

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Abstract

A systematic of literature was carried out on peer-reviewed journals published from 2000 to 2015 to help in determining the best strategy of evidence-based practice that can be applied in teaching literacy skills among students with multiple disabilities. A total of 12 studies were reviewed, some of which included science and mathematics skills alongside literacy skills. The articles were evaluated according to the methodological processes used in carrying out the studies. Generally, all the strategies were found to be evidence based practices, which can be used to teach students with multiple disabilities. The systematic instruction and self-directed learning emerged as the most popular peer teaching and technology. Due to lack of enough studies that majored specifically on the students who suffered from more than one type of disability, other forms of severe disabilities like autism and intellectual disability, which are considered under the umbrella of multiple disabilities, were included in the systematic review. Additionally, in the process of defining certain target responses to demonstrate learning, with discrete responses being common, the type of feedback and systematic prompting that was commonly used was time delay, while stimulus fading was the least used component. One-to-one instruction and massed trials were the most commonly used formats for teaching. Though this is not a proof that systematic instruction is the best strategy, it is a suggestion that it is applicable in several situations and preferred by many researchers. Other strategies have also equally given positive responses and are thus effective in teaching literacy among students with multiple disabilities.

Keywords: *evidence-based practice; literacy skills; students with multiple disabilities.*

1. Introduction

Evidence-based practices are used in teaching literacy for students with multiple disabilities because it ensures that the students receive instructions that are both efficient and effective in the acquisition of the required skills (Spooner, 2003). A few studies have been carried out regarding the successful instructional methods for teaching literacy among the students with multiple disabilities (Parker & Progrund, 2009). The lack of adequate research is specifically in the subject of instructions using braille (Durando & Wormsley, 2009).

The category of multiple disabilities characterizes a wide variety of specific impairments or conditions. It is a category of disabilities that is comprises of one of a combination of different conditions, which can negatively influence the capacity of a student to be taught and gain academic success (Brantlinger et al., 2005). Students with severe or significant disabilities are included under the category of the students with multiple disabilities (Turnbull, Turnbull & Wehmeyer, 2007). Westling and Fox (2009) notes that Individualized Education Programs and past assessments are the best places where classroom teachers can gain knowledge regarding how literacy is taught to the students with disabilities. The teachers can also form relationships with the parents to help in provision of more detailed information regarding the conditions of the students (Gersten et al., 2005). However, teaching literacy among the students with disabilities may be challenge due to the fact that two or more of the five deficits may affect them: intellectual functioning, motor skills, adaptive skills, communication skills, and sensory functioning (Browder & Spooner, 2006).

Majority of the students who are placed within the category of multiple disabilities have a given degree of cognitive

deficiency, though the actual analysis of the deficiency can be undermined or ambiguous (Snell & Brown, 2006). The level of abilities of such students can differ largely from academic, functional, to general skills in life (Hunt and Marshall, 2006). However, majority of these students still have the ability of learning at their specific personal levels when they are given the appropriate materials and support (Spooner & Brown, 2011). However, it may be challenging for the students with multiple disabilities to develop adaptive skills that match their ages, the ability they have towards learning can enable them gain desirable level of independence in many areas of life skills (Kauffman, 1996). Correct programs of educations should be incorporated in the self-advocacy and self-care initiatives of these students to improve the effectiveness of their inclusion within the community.

Apart from sensory impairments and the deficits in the student's motor development, the disabilities that the children may suffer within the area of communication present the most significant challenge in helping improve the conditions of the students (Turnbull, Turnbull, & Wehmeyer, 2007). The students find it difficult to communicate to others about their wants, pains, and needs. This limitation makes it hard to gain proper intellectual and emotional development among the students. Augmentative communication systems and assistive technology are believed to have the ability of addressing communication challenge among the students with multiple disabilities.

Determination of the right educational program for the students who have multiple disabilities is a task that has proved to be highly daunting, as the students require many different pervasive support systems (Hunt & Marshall, 2006). The process of planning should include many disciplines as well as teachers, parents, assistive technology teachers, physical therapists, and many other different support staff. The student should always be the center of the planning process, and the desires as well as strengths of the student should act as the guidelines of the whole planning process. According to Lane, Kalberg, and Shepcaro (2009), particular measures to success should to be established, and timelines ought to be determined for every goal of the educational initiative. Additionally, supports and resources that the student needs in order to achieve educational objectives should be determined and adequately tackled.

Peer tutoring is an example of an approach that may effectively be used in teaching literacy among the students with multiple disabilities (Hunt & Marshall, 2006). This method has been proved highly effective among students with multiple disabilities. However, its success is noted in the case where the tutoring involves a two-way relationship between students and the tutor. Students with significant or multiple disabilities ought to be able to give some response to the tutoring initiative; this could be through social behavior (Hunt & Marshall, 2006). It was mentioned by Turnbull, Turnbull, and Wehmeyer (2007), for this two-way relationship to take place, and to ensure that the objectives of learning are achieved, tutors have to understand the best evidence-based educational strategy that is significant in teaching students with multiple disabilities. Overall, the aim of this study was to review and analysis of peer-reviewed journals published from 2000 to 2015 to help in determining the best strategy of evidence-based practice that can be applied in teaching literacy skills among students with multiple disabilities.

2. Methodology

This paper involved a systematic analysis of 12 studies on the best evidence-based practices for teaching literacy to students with multiple disabilities between 2000 and 2015.

The research questions that this study sought to address included:

- i. To what extent can the application of systematic instruction be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?
- ii. To what extent can the application of self-directed learning be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?
- iii. To what extent can the use of peer tutoring be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?
- iv. To what extent can the application of technology be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?

2.1 The Procedures

To perfectly address these research questions, the systematic review involved the location and analysis of studies from journal articles that were published between 2000 and 2015. Recognized academic databases that were used in retrieving the journal articles for this study included the Sage Journals database, Research Gate database, Jstor database, the psycINFO database, and Educational Resources Information Centre (ERIC). The combination of

descriptors that were applied in selecting the journals included pervasive developmental disorder, autism, autism developmental disorders, systematic instruction, peer tutoring, self-directed learning, academic skills, and technology. The study specifically relied on the journals from these databases, and there were no other manual searches conducted, as these databases contain studies that are peer reviewed and have thoroughly conducted researches. All the 12 journal articles reviewed in this paper involved actual research studies that were carried on participants suffering from moderate or severe disabilities. Four articles examined the role of systematic instruction on teaching academics to various participants, four investigated the use of self-directed learning in teaching academics to the participants, two majored on the use of peer tutoring, and the other two majored on the use of technology.

3. Results

3.1 Methodological Quality Assessments

Table 1. Quality Assessments of Studies

Study	Study Design	Participants	Teaching Strategy
Browder, Hudson, and Wood (2013)	A multiple probe across participant's single case design	The study involved three participants from a public middle school within an urban area in Southeast. These included Carmen, an eleven-year-old girl whose IQ was 51; Eva, a girl or 13 years and an IQ of 45; and Andy, a boy with an IQ of 47 and 13 years of age. The participants were selected as long as their IQ was below 55, the level for the moderate intellectual liability. The participants were of Grades 6-8 and emergent readers.	The study involved giving instructions to the participants within special education classrooms that were self-contained. The participants were recruited after the researchers proved, using scores, that they were emergent readers. A graphic organizer and books for language arts in middle schools were used in giving instructions to the participants within a conference room that was not visited by other school staff or students, apart from any second observers.
Connella-Malone et al. (2012)	A multiple-probe across participants, adapted alternating treatments design	The study participants were three students who were adolescents with profound moderate disability. Selection criteria involved their ability to perform some basic daily skills, ability to design precise education goals associated with daily living skills, and recommendations from their educational teams. The first participant, Matt, had non-systematic form of communication because of Noonan syndrome and intellectual disability. The other participant, Ann, was	The study involved the use of two tasks: table washing and sweeping. The tasks were performed using a Bissell manual sweeper, and an Apple iPod Touch of second generation was used in giving instructions to the participants. An auxiliary speaker was used to ensure that the instructions were loud enough to be heard by the students.

Godsey et al. (2008)	A multiple investigation across subjects design	15 years old, and had moderate intellectual disability, mild cerebral palsy, and trisomy syndrome. The last participant, Mark, was also 15 years of age and suffered from moderate intellectual disability as well as autism.	The experiment involved preparation of food and other pictorial directions include within the objectives in the students' IEP. After the determination that the students had no prior experience in cooking certain food, it was the role of the peer tutors to teach them the recipes.
Jameson et al. (2007)	A multiple baseline across behaviors, single subject alternating treatment design	The study participants included four students, all of whom were male, and 11 peer tutors, 9 females and 2 males. The students' ages ranged from 15 to 20 years and they enrolled for classes in a public high school where they attended classes with regular students. The students include Jake a 16 years old student; Louis, a 20-year-old student; Charlie, a 15-year-old; and Jonah a 17-year-old. All the students had moderate intellectual disability.	The study was designed to compare and determine the relative efficiency of one-to-one fixed instruction within a setting of a general classroom as well as a one-to-one mass practice instructional within a setting of a special education classroom. Both the methods proved effective, with one working well on two students, another on one student, while the fourth student showed no differences.
Jameson et al. (2008)	Two parallel multiple-probe across-participant designs	The study participants were 3 students who had significant cognitive disabilities, 3 peer tutors with no disabilities, and 2 general education teachers.	The students with disabilities were recruited in middle schools where they participated in classrooms of general education settings for at least two classes in a day. The general educators were meant to help the

Jimenez et al. (2012)	A single-subject design	<p>The study involved peer educators, students with disabilities, and special education teachers. There were six peer educators, all of whom were 11 years old, students at sixth grade, and students in the same class as the students with disabilities in the general education classrooms. There were five students with disabilities who were recruited for the study, and the criteria for recruitment was having an IQ below 55, a clear mode of response, ability of identifying at least 20 picture symbols and ability of identifying at least 10 sight words. One special education teacher was involved to help in data collection.</p>	<p>principal investigator collect data for the research. The peer educators were meant for tutoring the students with disabilities in given areas of studies.</p> <p>Because the students were already within a classroom that offered special education to students with moderate disabilities, the study involved an introduction of a new concept in the subject to the students. The teachers provided normal lessons and the peer educators were meant to help the students with disability understand the concepts.</p>
McKissick et al. (2013)	A multiple probe across participants design	<p>The study involved three participants. The first, Mike, was a fourth grade 10-year-old male with cognitive disability. The second, Desiree was a 9-year-old third grade student who had intellectual disability and limited English proficiency. The third was Tyree, a ten-year-old fourth grade student who suffered from autism and aphasia.</p>	<p>The study involved the participation of the students in baseline probes as well as intervention sessions, all of which took place in the students' special education classroom. The sessions took place in the morning hours and involved wearing headphones during intervention and probes to hear verbal cues from CAI and eliminate any distractions. The intervention involved PowerPoint, hyperlink functions and timed features.</p>
Mechling et al. (2002)	A multiple probe across	<p>The study involved four students, 3 girls and 1 boy.</p>	<p>The participants attended a private school that is</p>

Mithaug and Mithaug (2003)	three sets of words design	These participants had moderate intellectual disabilities, and their selection depended on ages (9-17 years); IEP objectives regarding daily living, community based instructions and functional academics; levels of intellectual disabilities; and their entry-level behaviors.	specifically meant for the students with moderate intellectual disability and took part in tutorial, half day and full day sessions. The skills that were being tested were screened via teacher interviews, review of IEPS, and current adaptive and chronological skill assessments.
Schneider and Goldstein (2009)	A multiple baseline and reversal design	The participants were four pupils: Alice (5 years old), Bob (6 years old), Carter (6 years old) and Edward (6 years old). Alice and Bob were diagnosed with ASD (autism spectrum disorders), Carter with attention deficit hyperactivity disorder, and Edward with emotional disturbance.	The participants were enrolled in a school meant for children who suffer severe behavior and learning problems. At the beginning of the study, no participant undertook independent work in unsupervised periods. To determine the self-management behavior of the participants, student- or teacher-directed instructional sessions were undertaken every morning, and after two hours, independent work sessions were introduced.
Shogren et al. (2012)	A multiple-baseline design across participants	Three students in the fifth grade took part in the study. The criteria used in picking the students included being diagnosed with autism, demonstration of problems of off-task behavior alongside impairment in social communication, and lack of reception on any intervention in the past of the present period.	The students were enrolled in a school within a low-income neighborhood, with majority of students from minor backgrounds. At the beginning of the study, all the students were given services in a self-contained classroom. In the midway, two students were moved to the mainstream classrooms. Oral and Written Language Scales and Social Skills Rating Systems were used to Assessing the participants.
	A group-randomized trial control group design with switching replication	The study involved 312 high school students, all of whom had disabilities and were receiving special education. 70% had learning disabilities and	The study took place within three states and 20 school districts. Various educational settings were used, with 38% of the students attending general

Smith et al. (2011)	A multiple probe design across behaviors and participants	30% intellectual disabilities.	education classrooms, 31% a resource-type approach, and 31% a self-contained approach. The use of different settings was to give appropriate intervention per setting and determine the role of self-directed learning in improvement of academic skills among the participants.
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3.2 Verification of Evidence-Based Practice

Reviewing the acceptability and quality of the studies helped in verifying whether specific practices were considerable as evidence-based studies for teaching academics. As indicated by Horner et al. (2005), a practice in a study should be adequately defined in order to give the future researcher an opportunity to undertake a similar study. This helps in verification of the findings of the study, thus making it evidence based. Other issues considered included the number of studies, geographical regions, population of participants, and the number of the investigative teams. Overall, from the analysis of the 12 studies, the evidence levels in seven were strong while the rest were considered to have moderate level of evidence. Since all these studies addressed the research questions, it was concluded that they met the required criteria for evidence-based studies.

4. Discussion

From the 12 studies that were analyzed in this systematic review, there were 5 students who were diagnosed with autism, 333 students were found to have moderate or mild intellectual disabilities, 6 students who were diagnosed with severe disabilities, and 8 students who suffered from multiple disabilities. Moreover, from the 12 studies, the research designs that were applied included 1 multiple-probe across-behavior design, 3 multiple-baseline across-participants design, 1 alternating treatment design, 1 single subject design, 1 group-randomized trial control group design, 4 multiple-probe across-participants design, and one study that combined multiple-probe against behavior with multiple probe against participants designs. Though many of the studies took place within settings for special education ($n = 41.67\%$), some studies were also carried out in general education setting ($n=33.33\%$), within

both special education and general education settings (n=16.67%), and other different settings like home or cafeteria (n=8.33%). Additionally, majority of the studies evaluated the generalization across settings, people, and materials, and less than half of the studies collected data that was restricted to performance or maintenance of the students with time.

4.1 First Research Question

To what extent can the application of systematic instruction be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?

Systematic instruction whose origin is traced from the applied behavior analysis' principles has a significant evidence base that span for over 60 years in the support of daily living skills and teaching of community. Early studies regarding this strategy can be traced from Miller and Test (1989), in their study undertook comparisons of the influence of most-to-least intrusive prompts and regular time delay on attainment of laundry skills among students diagnosed with moderate intellectual disabilities. In addition, several studies have documented the application of systematic instruction as an evidence-based practice for teaching academic skills to children with disabilities (Morse & Schuster, 2004; Browder et al., 2009). In this systematic review, four studies applied systematic instruction as a strategy of teaching various academic skills to students with multiple disabilities (Jameson et al., 2007; Mechling, Gast, & Langone, 2002; Smith et al., 2011; Browder, Hudson & Wood, 2013).

Jameson et al. (2007) demonstrated that systematic instruction is also an evidence based practice where students are taught word and symbol recognition using differential reinforcement and constant time delay among students with moderate intellectual disabilities. Similarly, Mechling, Gast, and Langone (2002) successfully applied video simulations in teaching students who had moderate intellectual disabilities the task analysis steps for tracing items within a grocery store. Smith et al. (2011) on the other hand applied simultaneous prompting in teaching food classification information and restaurant sight words to students with both severe and moderate intellectual disabilities. These studies, together with the study of Browder, Hudson, and Wood (2013) on reading comprehension using least intrusive prompts have proved that systematic instruction is a strong evidence-based practice in teaching academic and literacy skills to students with both moderate and severe disabilities.

4.2 Second Research Question

To what extent can the application of self-directed learning be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?

Though the teacher-delivered systematic instruction has highly proved to be effective in teaching literacy skills to students with significant or severe disabilities, the provision of self-directed learning has also emerged as a significant evidence-based practices in teaching these students literacy. The major strategies that have been used and proved to have strong research evidence within self-directed learning are the Self-Determined Learning Model of Instruction and Pictorial self-instruction. Direct inquiry is also a recent strategy that has moderate evidence base in the promotion of academic learning.

There were four studies in this systematic review that applied self-directed learning strategy in passing academic skills to students with disabilities (Mithaug & Mithaug, 2003; Schneider & Goldstein, 2009; Shogren et al., 2012; Jimenez et al., 2012). Mithaug and Mithaug (2003) used pictorial instruction among students with autism, where the students applied a planner of picture-based graphic organizer to complete academic assignments. Similarly, Schneider and Goldstein (2009) used pictorial self-instruction to teach students with disabilities socially appropriate behavior. In the study of Shogren et al. (2012) illustrated that the use of Self-Determined Learning Model of Instruction leads to major improvements in curriculum success and specific goal attainment among students with disabilities. Jimenez et al. (2012) equally proved using their KWHL chart that directed inquiry results to an increase in the goal attainment rate among students with disabilities learning academic skills.

4.3 Third Research Question

To what extent can the use of peer tutoring be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?

Peer tutoring is another instructional strategy with a strong literature of evidence that suggests its social and academic benefits for the tutee and the tutor (McDonnell et al., 2001; Rohrbeck et al., 2003). A peer tutor should be typically of the same age as the tutee, and within a similar general education classroom. This makes it easy for the tutor to deliver the necessary instruction to the tutee. As Heron et al. (2006) elaborates, peer tutors receive training to enable them incorporate appropriate opportunities to respond, active student responding, feedback as well as

reinforcement during the sessions of giving instructions.

This systematic analysis included two studies where peer tutoring was applied as a strategy of delivering academic skills to students with disabilities (Godsey et al, 2008; Jameson et al., 2008). Godsey et al. (2008) trained peers to enable them teach instruction regarding the sequential tasks followed in food preparation to students who suffer from severe disabilities. On the other hand, Jameson et al. (2008) provided training to peers to enable them teach major concepts related to art and health with the use of constant time delay. In the two studies, peer tutoring emerged as a significant strategy for helping students with disabilities achieve their academic goals.

4.4 Fourth Research Question

To what extent can the application of technology be viewed as an evidence-based practice in teaching academic skills to students with multiple disabilities?

With the recent advances that have taken place in technology, there has been a rise in the application of technological intervention to teach literacy skills to students with significant or severe disabilities. The application of technology in teaching the students with severe or multiple disabilities has a strong base of evidence with regard to the type of technology that is applied. Computer-assisted instruction and video modeling and prompting are the two basic modes of interventions that use technology.

This systematic analysis involved two studies that applied technology in the provision of intervention to students with significant or severe disabilities (Cannella-Malone et al., 2011; McKissick et al., 2013). In the differentiation between video prompting and video modeling, Cannella-Malone et al. (2011) established that students diagnosed with severe disabilities recorded greater success in the use of video prompts than in the use of video models. McKissick et al. (2013) equally concluded that computer-aided instruction improves the rate in which the students achieve their literacy objectives.

5. Conclusion

There is a wide body of research regarding teaching various chained and discrete skills to students who have severe and moderate disabilities that support the use of systematic instruction. Teachers are advised to use prompting practices that are compatible with the nature and complexity of targeted skill. Though a long history of the most efficient systematic instruction for educating students with severe and moderate disabilities, within the past decade, evidence specifically related to efficient academic instruction was offered. The wide spread application of systematic instruction and the existence of evidence for more than a couple of decades makes the strategy gain popularity as one of the most effective evidence-based strategies for teaching literacy to students with multiple disabilities. In these strategies, several methods have been applied to investigate its effectiveness in teaching the targeted students various academic skills. Among these methods are academic skills (Courtade et al., 2010); data collection skills (Belfiore & Browder, 1992); simultaneous prompting (Morse & Schuster, 2004); time delay (Browder et al., 2009); least intrusive prompts (Browder et al., 2008); and most-to-least intrusive prompts (Aykut, 2012). The wide use of systematic instruction, its application among various participants, and its use in various settings make it among the most preferred evidence based methods in teaching literacy to students with significant or severe disabilities.

Studies have consistently proven that students with severe disabilities demonstrate the capacity of participating in self-directed learning that is aimed at completion of employment, functional, and academic tasks. Research indicates that the benefits from the efforts of the teachers in instructing the students using directed inquiry, pictorial self-instruction, and "Self-Determined Learning Model of Instruction (SDLMI)" have proved beneficial in the achievement of the objectives in various tasks. The support given by various research studies is a significant proves that self-directed learning is a major evidence based practices in teaching literacy skills to students with significant or severe disabilities (Shogren et al., 2012, p. 321).

Pictorial self-instruction involves the use of pictures to demonstrate to the students with severe or multiple disabilities how various tasks should be completed. Studies that have successfully applied pictorial self-instructions include Mithaug and Mithaug (2003) in the completion of academic assignments; Hume, Plavnick and Odom (2012) in the completion of tasks; Schneider and Goldstein (2010) in adoption of socially appropriate behavior; Lancioni and O'Reilly (2002) in preparation of food; and Steed and Lutzker (1997) in the completion of vocational tasks. SDLMI has also been applied in teaching the students with multiple disabilities self-directed learning in taking action, setting goals, and making adjustments to plans or procedures (Wehmeyer et al., 2000). The method involves the application of four steps in teaching students: identification of the problem, identification of the potential solutions, identification of potential barriers, and identification of the consequences that every solution bears. The studies that

have successfully implemented this method include Agran et al. (2006) in improvement of academic performance of participants, and Shogren et al. (2012) in achievement of objectives in general education curriculum as well as transition and academic goals. Directed inquiry on the other hand has been applied more recently, making it necessary to rate it as a moderate method with regard to evidence base. It involves the application of directed-inquiry chart in answering questions, especially in social studies and science. Some studies that have successfully used this method are Jimenez et al. (2012) and Bethune and Wood (2013).

Peer tutoring is another instructional strategy for teaching literacy to students with disability that has been regarded as a significant evidence-based practice. Several research studies have been approved of using of this practice in teaching chained and discrete skills to students with significant or severe disabilities. Moreover, peers have the ability of delivering systematic instruction with the aim of promoting functional and academic results of the students with multiple disabilities. A numeral of studies has proved that peer tutoring has the ability of passing general skills to the students with significant or severe disabilities (Godsey et al., 2008); and improving social interactions and academics among students with severe disabilities (Carter et al., 2007). As such, like systematic instruction and self-directed learning, peer tutoring has proved to be a major evidence based practice in teaching literacy skills to the students with severe and moderate intellectual disabilities.

The last strategy reviewed in this research is the use of technology as an evidence-based practice in teaching literacy skills to students with significant or severe disabilities. With the current advances in technology, a number of researchers have taken the initiative of evaluating the effectiveness of the use of technology in achieving learning objectives among students with moderate as well as severe disability. The most common methods applied include video prompting and video modeling for the students that are being taught how to perform new social and living tasks, and CAI to provide systematic instruction through technology devices. The studies that have shown positive use of video prompting and modeling include Cannella-Malone et al. (2011) and Bellini and Akullian (2007), while those that have shown success in the use of CAI include Knight et al. (2013), and Pennington (2010), among other.

From an analysis of the minor objectives of this systematic review, it emerges that the four strategies: systematic instruction, self-directed learning, peer tutoring, and the use of technology are evidence based practices in the delivery of literacy skills to students with multiple disabilities. However, the overall objective was to determine the best evidence-best practice from all the four strategies. It emerges that the use of systematic instruction is the most popular evidence-based practice because it has been widely used in a number of research studies. However, it is not correct to conclude that it is the best strategy, as other strategies have proved equally beneficially. It would be accurate to conclude that in terms of popularity; systematic instruction is the most prevalent followed by self-directed learning, peer tutoring and finally technology. However, all the strategies have proved effective in teaching literacy to students with multiple disabilities. It is this significant to select a strategy depending on the exact literacy objectives that ought to be improved among the students with these intellectual disabilities.

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